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Ninth Western Shade Tree Conference at Long Beach, May 7, 8, 9

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P. O. Box 886 **Santa Monica, California**

TREES Magazine is a bi-monthly Journal published at Santa Monica, California, by Edward H. Scanlon, and is devoted to the furtherance of the technical and business administration of Trees (Street and Ornamental); Parks (Municipal and National); and Forests (State, National and Private), in the U. S. P. O. Box 886, Santa Monica, California. Subscription by mail, $1 per year; outside United States, $1.50. Advertising rates upon inquiry. Unsolicited manuscripts must be accompanied by postage return.

ALONG THE WAY

With . . .
EDW. SCANLON

■ Say, HANBURY! You, I mean, the PEORIA FRANK—whaddaya mean sending me that picture of GENEVIEVE in her "TREE CLIMBING OUTFIT" (shorts)? (OK, send more.)

* * *

■ *IRV TROEGER, for many years Asst. Supt. of Parks at SANTA MONICA, has been APPOINTED SUPT. OF PARKS, a post made vacant by the recent death of Frank Brisbin. IRV SHOULD DO A SWELL JOB. He is PROGRESSIVE, a STUDENT and a NICE GUY. LOTS OF LUCK, CHUM!*

* * *

■ BOB THOMPSON VERY BRAZENLY sent me a LITHOGRAPHED postcard of a JACARANDA in bloom in FLORIDA with the insult, "DID YOU SAY JACARANDAS?" Anybody can paint one, but they BLOOM IN CALIFORNIA like they PICTURE THEM IN FLORIDA.

* * *

■ *Have had about THREE SWELL CARTOONS from EMANUEL FRITZ on TREE PRESERVATION. Will have a nice collection of these interesting pix some of these days. Would make a GOOD DISPLAY for the CONFERENCE.*

* * *

■ CHARLES RAPP is on the EDUCATIONAL EXHIBIT COMMITTEE for the 18TH NATIONAL SHADE TREE CONFERENCE and he'd like some help. Does anyone know of a collection of DISEASES or INSECT PIX, or in fact ANY KIND OF A COLLECTION that would be suitable for the Conference? GIVE CHARLEY some HELP on this; he has a TOUGH JOB and a LITTLE COOPERATION will be GREATLY APPRECIATED. His address is 1404 CENTRAL ST., EVANSTON, ILL.

* * *

■ *Has anyone A SET of all the PICTURES of PAST CONFERENCES? That should make a VERY INTERESTING EXHIBIT.*

* * *

■ How about the PIX OF STREET TREE PLANTINGS as per the "CITY ARBORISTS COLUMN" in the last issue? This would be a fine opportunity to show HOW STREETS SHOULD LOOK. BETTER GET BUSY, LADS!

* * *

■ *The* 1941 *report of the SALT LAKE CITY SHADE TREE COMMISSION has recently been received from RUFUS D. JOHNSON, TREE WARDEN. It is a report that should prove of INTEREST TO ANY ARBORIST, and tells the story of a FIGHT TO ESTABLISH TREES under what are perhaps the most SEVERE GROWING CONDITIONS in these States of ours. Following is AN EXCERPT from the report by Mr. Johnson that EXPRESSES A FINE SENTIMENT. "To be well balanced, plans of progress must include every factor that makes for the city delightful. Street trees are a valuable asset of any community and it is imperative that all new plantings shall be of sterling quality trees that will endow our street tree program with the same dignity and worth that we insist upon in our other improvements."*

* * *

■ JACK KENEALY, the EFFERVESCENT TREE WARDEN of ARDMORE, PA., has recently prepared a FINE PAMPHLET for DISTRIBUTION to the CONSTITUENTS of his township. It is titled "FIGHT THE TENT CATERPILLAR." More authentic PROPAGANDA material of this nature would do TREE PRESERVATION a whole LOT OF GOOD, particularly in this war period when PEOPLE will BE STAYING home MORE AND MORE.

* * *

■ *CARL FENNER, ASST. CITY FORESTER of LANSING, MICH., gives some worthwhile figures in his annual report:* 455 *TREES REMOVED at an average cost of* $11.67 *PER TREE;* 729 *TREES PLANTED at an average cost of* $5.66 *PER TREE. SINCE THE STREET TREE PLANTING program was placed on a MANAGED BASIS in* 1930, 14,855 *TREES HAVE BEEN PLANTED,* 1,766 *trees pruned at an average cost of* $1.89 *each;* 901 *trees were sprayed for various insects and diseases at an average cost of* $.134 *per tree.*

* * *

■ GEORGE R. ABBOTT, TREE WARDEN of ANDOVER, MASS., responded to my recent SOS for more CORRESPONDENCE with MEN IN THE FIELD with some fine data on the TREE WARDENS COURSE given each year at MASSACHUSETTS STATE COLLEGE. You see the STORY ON PAGE 6.

* * *

■ *If anyone wants some DOPE ON ORCHIDS get in touch with GLENN GARWOOD, SUPT. OF PARKS, SOUTH PASADENA, Calif. He's NORMAL in a lot of ways, but NUTS on CATTLEYAS, etc.*

* * *

■ HAROLD NEWINS, University of Florida, sent us the interesting paper he delivered at the recent SOUTHERN SHADE TREE CONFERENCE for publication in TREES. It deals with MISNOMERS in PLANT NAMES and STRESSES STANDARDIZING to AVOID CONFUSION. VERY GOOD—we'll run it SOON.

* * *

■ *The "BLUME IS ON THE SAGE" again. Back in TEXAS is DOC and glad of it so he can SHUCK THEM SHOES and be comfortable after a sojourn in the ALLEGED SUNSHINE STATE OF FLORIDA at the SOUTHERN S. T. C.*

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Vol. 5 Bi-Monthly No. 2

Subscription Price $1.00 per Year

The Editors of TREES invite discussions, comments and all types of literary materials pertaining to trees and tree preservation from any person engaged either in the scientific advancement or commercial development of the field.

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■ KARL DRESSEL is WORRIED ABOUT TIRES and so didn't make the ANNUAL PILGRIMAGE TO FLORIDA. DON'T WORRY, KARL. GOOD OLD CALIFORNIA will take care of the SITCHEAYSHUN if the POLITICIANS ever GET THE LEAD OUT OF THEIR SHOES and give the "GO" ON GUAYULE.

YANKS ROAR—Tee! Hee!

Mr. Edward H. Scanlon,
Santa Monica, California.

Arlington, Mass.
February 18, 1942

Dear Mr. Scanlon:

Quite a roar went out from the Yanks out this way when they read your page 3 note on "So Few Flowering Trees in the East." My immediate reaction for your consideration is as follows:

"Anybody got any ideas? Shoot 'em in, boys! Idea shortage is heart-rending. TREES EDITOR during colossal, permanent, cranial, vacuum black-out bleats, 'So Few Flowering Trees in the East.' East of what—Tobruk?

Should you, Honored Sir and Editor, by any remote chance mean New England? Choose your seconds. We will erase this base calumny in Chicago next August at sunrise with pistols or pole saws.

Sincerely, we all think you are doing a fine job.

Sincerely,
H. L. FROST AND HIGGINS CO.
J. Cooke White

JCW:T

So, JOE, you don't like MY ACCUSATION, THE TRUTH HURTS and so forth. OK! Well, I ACCEPT YOUR CHALLENGE—will meet you at the NATIONAL SHADE TREE CONFERENCE banquet in CHICAGO—BROADSWORDS AT 100 PACES.—Ed.

Buy from Advertisers who use TREES

March-April, 1942 *The Journal of American Arboriculture* Volume 5 — No. 2

EDWARD H. SCANLON, Editor
Editorial Office: 1102 Twentieth Street—P. O. Box 886—Santa Monica, California

"No place is complete without trees. A home without trees is charmless; a road without trees is shadeless; a park without trees is purposeless; *a country without trees is hopeless*"

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CORDIALLY YOURS

AN OPPORTUNITY TO JUMP AHEAD

Definitely there are two distinct and equally important divisions of tree preservation work today. One is the commercial arborist whose principal practice is secured from the home and estate owner, public utilities and other private or public owned institutions. The other big division is the Municipal Arborist or City Forester. This branch deals with public-owned trees on city streets and in parks.

A much closer bond of unity should be knit between these two groups for the definite advantages that will naturally accrue. The City Arborist has a distinct prestige advantage over his fellow arborist in private practice by nature of the fact that the public must depend on his ability and decisions in matters pertaining to street trees; then too, there is the indefinable glamour, or call it what you will, about the public office holder that the public has and therein lies a sleeping giant. Sleeping because to date the commercial men have not taken advantage of this opportunity to build better public relations—principally good will and understanding.

The City Arborist, in most cases, will very readily be given practically any amount of free newspaper publicity by his local paper; also, he is in a position to institute ordinances that may work for or against the commercial arborist. With this powerful potentiality there should be set up immediately a closer bond of teamwork between these two branches.

An organization like the National Shade Tree Conference sponsoring Certified Arborist laws in all states, through its widespread membership, could secure the aid of City Arborists in recommending only certified men, also the certified status would have a definite reaction in eventually becoming a necessary qualification for city employees with a very happy result in this direction where today in too many city departments political affiliations and not knowledge or ability control the personnel.

Undoubtedly great good would result from a well-laid plan and such a plan should begin to form immediately because of the imminent focusing of the public eye on trees and gardens for relaxation and pleasure in the next few years due to war prohibitions.

HEIL CENSORSHIP!

In the past many wild-eyed stories pertaining to horticulture have been written by writers interested principally in the pub-

lisher's check. Of course you can hardly blame them for such a sin—they must eat! But when they become so wild-eyed and sensational as to make claims that are definitely ambiguous it is very bad for most people engaged in the various horticultural endeavors.

It would seem that the organizations concerned with the progress of the several professions could justifiably set up an editorial board consisting of two or more members from each organization representing the various sciences and professions, to serve for a year, for the purpose of editing such material. The publishers of general magazines and papers circulated to the public would undoubtedly avail themselves of such a service if it existed, and they were informed; because they do not like criticism on a broad scale such as no doubt some of them receive from time to time.

Probably no one person could write an article that would meet universal agreement, but when it is universal disagreement there is an answer to such a situation.

SPRAY MATERIAL SITUATION

New York City
January 27, 1942

Edward H. Scanlon,
P. O. Box 886,
Santa Monica, California.

Dear Mr. Scanlon:

As per your request I am giving you a short and timely notice in regard to spray materials for 1942, which you are at liberty to use as you see fit.

SPRAY MATERIALS FOR 1942

The question has been raised as to the availability of spray materials for the protection of shade and ornamental trees this year.

While there is a limited supply of most materials used in the tree service, there is a shortage in copper sulphate which may require the use of more sulfur compounds.

There is also some shortage of arsenate of lead, but there are some combinations that can be made with arsenate of lead that greatly increases its toxicity requiring very much less for effective insect control.

So far as we know there has been no restrictions placed on the sale to public sprayers. However, we believe that it will be well to look ahead as far as possible and place your orders for your requirements for immediate delivery for we do not know what the morrow may bring forth.

We do not look for any undue increase in prices, only enough to take care of extra cost of labor and materials, but there will not be as many high-pressure salesmen around to see you this year and still fewer next, so you should act accordingly.

Sincerely yours,
B. G. PRATT COMPANY
B. G. Pratt, President

BGP:her

RECIPE FOR AN ARBORIST

By R. R. FENSKA
White Plains, N. Y.

First get a big kettle and a fire that's hot,
And when everything's ready, throw into the pot,
A dendrologist, entomologist, of pathologists a few,
At least one soil expert and a chemist or two.

Next add the spray man, and right after that,
A man with some sense, and a good diplomat,
At least a good salesman, then give it a stir,
And add to the mess a good engineer.

A man that knows people, and don't leave from the list,
A tree surgeon, climber, and a fair botanist.
The next that's added must be there, that's a cinch,
It's the man that will stay when it comes to a pinch.

Add a man that will work, and not stand round and roar,
Who can do ten thousand things and just a few more,
Now boil it up and skim off the scum,
And an Arborist you'll find in the residuum.

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6300 State Road PHILADELPHIA, PA.

Tree Warden Course In Bay State

By EDWARD H. SCANLON

Since 1899 it has been mandatory in the State of Massachusetts that a Tree Warden be elected in each town. Previous to that year, in 1896, the General Court had authorized towns to elect a Warden for a one-year term, but it is not known how many towns followed this authorization; however, according to Simoneau (1) in recounting the various provisions, laws, etc., on the books up to this time, "It requires no extended discussion to point out the confusion which must have resulted from the multitudinous and apparently inconsistent legislation passed up to this time (1897) and then in force."

The full story of this legal building and re-building is fully described in Judge Simoneau's bulletin. As interest in the subject increased more and more problems presented themselves until in 1913 the late Dr. George E. Stone, then head of the Botany Department at Massachusetts State College, gathered around him a number of the State's Tree Wardens and organized the Massachusetts Tree Wardens and Foresters Association. As Mr. George R. Abbott, Tree Warden of Andover, Mass., so nicely puts it, "Tree Preservation is our aim, a tree conscious public our hope."

Along in 1932 Dr. Stone, Major Harry Burnett, former Tree Warden of Southborough, Mass., Professor R. P. Holdsworth, Massachusetts State College, Dr. Malcolm A. McKenzie, also of the College staff, with the cooperation of the Tree Wardens Association instituted the first short course for Tree Wardens and Arborists, and they have just recently (Mar. 30-Apr. 4) completed the ninth annual session.

The members of the Association were saddened in 1937 with the death of Dr. Stone. His bulletin, published in 1916, "Shade Trees, Characteristics, Adaptation, Diseases and Care," was universally recognized as an authoritative treatise on tree problems, and his organizational work had stamped him as a great leader and lover of tree preservation.

Dr. Stone's death seemed to leave an unfillable void, but out of the shadows there emerged the stocky, energetic Dr. McKenzie. "Doc" is located at the Agricultural Experiment Station and conducts investigations in Forest Pathology and Shade Tree Management, in his spare time he assists with organizing the program for the short course, then edits the proceedings.

The topics and material covered in this course according to George R. Abbott, who kindly brought the course to the attention of *"Trees,"* is based on suggestions from the men who attend. In this way, there is little danger of wasted time and all subjects discussed are of the daily problem type.

To illustrate the value of this pioneer of all Tree Preservation courses, the program for the recently held meeting follows.

SHORT COURSE FOR TREE WARDENS AND OTHER WORKERS WITH PUBLIC TREES

Indoor Culture of Plants: L. H. Jones, M.S.C.

A Botanist's Trail Through Southern California: G. L. Church, Brown Univ.

Current Literature in Forest Entomology: C. P. Alexander, M.S.C.

The Japanese Beetle Situation: C. H. Hadley, United States Department of Agriculture.

Some Impressions During Half a Cen-

(*Continued on page* 18)

(1) Shade Tree Law in Massachusetts, by Edward T. Simoneau, Bull. 349, Massachusetts State College, Amherst.

Attendants at Tree Warden Course March 1937

(1) Judge Edward T. Simoneau; (2) Geo. R. Abbott; (3) Harry Burnett; (4) Daniel G. Lacy; (5) Frederick R. Ralston; (6) Dr. Malcolm A. McKenzie; (7) Professor Harry Rich; (8) Professor R. P. Holdsworth; (9) Dr. Frank R. Shaw; (10) Dr. Charles P. Alexander; (11) Robert H. Lawton; (12) Arthur J. McCarron; (13 Professor A. Vincent Osmun; (14) the late Dr. George E. Stone, founder of the Association; (15) Andrew W. Stewart.

The remainder of the men pictured above at Short Course for Tree Wardens held March 22-27, 1937, are as follows: G. Richard Abbott, Andover, Mass., Tree Warden; Donald W. Arnett, North Reading, Mass., Deputy Tree Warden; Vernon S. Bagg, South Hadley, Mass., Tree Warden; Harry Burnett, Southborough, Mass., Tree Warden; Clarence T. Caldwell, Greenfield, Mass., private tree work, estates; John J. Connors, North Andover, Mass., Tree Warden and Moth Superintendent; Charles Corbett, Sears Road, Southborough, Mass., Climber, Tree Department; W. F. Cunningham, East Providence, R. I., New England Telephone Company; Arthur H. Cutter, Winchester, Mass., odd jobs in forestry work; Thomas J. Doherty, Greenfield, Mass., Landscaper; Mark L. Edgecomb, Manchester, Mass., Tree Warden; Joseph P. Goodreau, Palmer, Mass., Tree Warden; Stephen J. Grassie, Cohasset, Mass., Tree Warden; Roger H. Gushee, Ludlow, Mass., Tree Warden; Harry Hamilton, Middleboro, Mass., Landscape Laborer; Harold C. Harthan, West Boylston, Mass., Tree Warden; Joseph H. Hynes, Methuen, Mass., Tree Warden, Moth and Park Superintendent; Horace H. Jones, North Reading, Mass., Tree Warden; John A. Jones, Peabody, Mass., Highway Supervisor; Joseph Keating, Williamsett, Mass., Tree Warden; Harold M. Langden, Lowell, Mass., New England Telephone Company; Robert H. Lawton, Springfield, Mass., New England Telephone Company; Frederick W. Marshall, Wellesley, Mass., Mass. Dept. of Conservation; James J. Murray, Danvers, Mass., Tree Warden and Moth Superintendent; Arthur J. McCarron, Boston, Mass., New England Telephone Company; John A. McDonald, Salem, Mass., New England Telephone Company; Edward J. Padden, Clinton, Mass., Tree Warden; Leslie A. Peeke, Newburyport, Mass., Foreman, N. E. Forestry Service, Inc; Frederick R. Ralston, Hyde Park, Mass., N. E. Tree Expert Company; Walter W. Sanderson, Greenfield, Mass., State Landscape work; John L. Scharrett, East Taunton, Mass., Landscape laborer; John T. Shannahan, Chicopee Falls, Mass., Tree Warden and Moth Inspector; Clinton E. Sowerby, Marlborough, Mass., City Forester; Andrew Warren Stewart, Quincy, Mass., Foreman, Forestry Department; William St. Armand, Waltham, Mass., Foreman, State Department of Public Works; Amos St. John, Amesbury, Mass., State employee; George St. John, East Lee, Mass., Landscape laborer; Gordon Taylor, Concord, Mass., repair agent.

Western Tree Conference In Long Beach

The Ninth Western Shade Tree Conference should be a history making meeting. Undoubtedly the most important business that will come before the members will be the decision to affiliate with the National Shade Tree Conference as the Western Chapter. The Southern Shade Tree Conference meeting in February at Miami, Florida, voted to become the Southern Chapter and so became the first regional group to begin the true nationalization of the parent Conference. Opinion of various members and of the executive committee of the Western Conference seems to presage a yes vote for this important organizational step.

More exhibitors of commercial displays have signified their intention of being on hand for this meeting than at any previous one and the demonstrations of various mechanical devices, aerating machines, trucks, tree moving methods and so forth, promises a conference of much value to the active field man.

Headquarters will be in the Hilton Hotel and you are urged to send in your reservations early because of the heavy rush induced by defense work in the Long Beach area.

PROGRAM OF WESTERN SHADE TREE CONFERENCE
May 7-8-9, 1942
Display of Commercial Exhibits on Auditorium Stage

THURSDAY, MAY 7

Morning

9:00 Registration, Municipal Auditorium, at foot of American Avenue. (Parking at Auditorium.)
10:00 Address of Welcome: Mayor Francis Gentry.
10:20 Response: President C. F. Holderness.
10:30 "Commercial Value of Public Trees:" Gordon Whitnall, Planning Consultant, Los Angeles County.
11:00 "An Organized Plan for Street Tree Management:" Edward H. Scanlon, Consulting Arborist, Editor "Trees" Magazine.

C. F. HOLDERNESS,
President
Ninth Western
Shade Tree Conference
who will wield gavel at
Long Beach meeting.

12:00 Lunch-Picnic served in Bixby Park (60c).

Afternoon

1:30-3 Field Demonstrations (boxing, cabling, bracing, spraying); rope climbing contest; demonstration of various labor-saving devices and machinery. (Transportation will be furnished for those who do not have their own cars).

FRIDAY, MAY 8

Morning

9:00 Resume on Phytophthora Root Crown Rot: P. A. Miller, Plant Pathologist, U.C.L.A.
9:30 "Commercial Spray Problems:" Henry E. Crowley, Crowley Tree Service.
10:00 "The Nurseryman's Problem As It Relates to Shade Trees:" Carl Raahauge, Roy F. Wilcox Nursery.
10:30 "Physiological Factors in the Aging of a Tree:" Dr. F. W. Wendt, California Institute of Technology.
11:30 "Irrigation of Ornamental Trees:" Mr. M. H. Kimball, Farm Advisor's Office, Los Angeles County.
12 Luncheon, Army and Navy Club, 1800 E. Ocean Ave. (Program sponsored by commercial organizations. Kenneth Wilson, presiding. 85c.)

Afternoon

1:30 "Pruning of Ornamental Trees:" W. S. Rowland, Rowland & Newhouse Tree Service.
2:00 "Advantages and Disadvantages of Certain Shade Trees for Parks and Street Trees:" W. Allen Perry, Park Supt., San Diego.
2:30 Resume of Oak Witches Broom of California Live Oak: P. A. Miller, Plant Pathologist, U.C.L.A.

Evening

7:30 Banquet, Hilton Hotel ($1.50). Doc Winters, Master of Ceremonies. Entertainment, vaudeville.

SATURDAY, MAY 9

Morning

9:00 Announcements.
9:30 "Antidesiccants in Tree Preservation."
10:00 Demonstration of Budding, Grafting, and Inarching: E. R. Eggers, Supt. of Cultivation, U.C.L.A.
10:30 Business Meeting.
Report of Nominating Committee.
Election of Officers.

National Conference Committees at Work

The eighteenth National Shade Tree Conference which will be held in Chicago August 25th to 28th is beginning to shape up fine according to Bill Rose, General Chairman. This will be an epochal meeting, perhaps the most important in the history of the conference particularly from an organizational standpoint, so it is reassuring to learn that the important committees so necessary to the successful presentation of such a meeting are capably manned and functioning perfectly. The committee chairmen and members follow:

Chairman: W. E. Rose, Village of Hinsdale, Illinois. Hinsdale 1700.

Co-Chairman: A. E. Price, Swain Nelson Co., Glenview, Ill. Glenview 87.

Hostesses

Chairman: Mrs. A. E. Price, 84 Park Drive, Glenview, Ill. Glenview 359.

Mrs. Oakley V. Morgan, 404 Washington, Elmhurst, Ill. Elmhurst 2768.

Mrs. Don R. Hoyt, 5410 N. Lovejoy, Chicago, Ill. Palisade 4851.

Mrs. J. C. Fonder, 1618 Payne, Evanston, Ill. University 2260.

Mrs. Nels J. Johnson, 1212 Elmwood Ave., Evanston, Ill. Greenleaf 1877.

Mrs. Charles P. McFarland, 802 N. May, Aurora, Ill. Aurora 8160.

Mrs. Robert E. Everly, 350 Jackson, Glencoe, Ill. Glencoe 1791.

Mrs. L. J. Thalman, 2323 Lake Ave., Wilmette, Ill. Wilmette 561.

Mrs. F. J. Prem, 4 Electric Place, Wilmette, Ill. Wilmette 1765.

Trade Exhibits

Chairman: Oakley V. Morgan, 404 Washington, Elmhurst, Ill. Elmhurst 2768.

Robert E. Everly, Glencoe Park Dist., Glencoe, Ill. Glencoe 6.

A. E. Price, Swain Nelson Co., Glenview, Ill. Glenview 87.

W. E. Rose, Village of Hinsdale, Ill. Hinsdale 1700.

Field Demonstrations

Chairman: Noel B. Wysong, Cook County Forest Preserve Dist., Lake and Harlem Ave., River Forest, Ill. Forest 4470.

Roberts Mann, Cook County Forest Preserve Dist., Lake and Harlem Ave., River Forest, Ill. Forest 4470.

L. J. Thalman, 2323 Lake Ave., Wilmette, Ill. Wilmette 561.

Charles P. McFarland, 403 Woodlawn Ave., Aurora, Ill. Aurora 8160.

Miles C. Sharpless, Cook County Forest Preserve Dist. Forest 4470.

Educational Exhibits

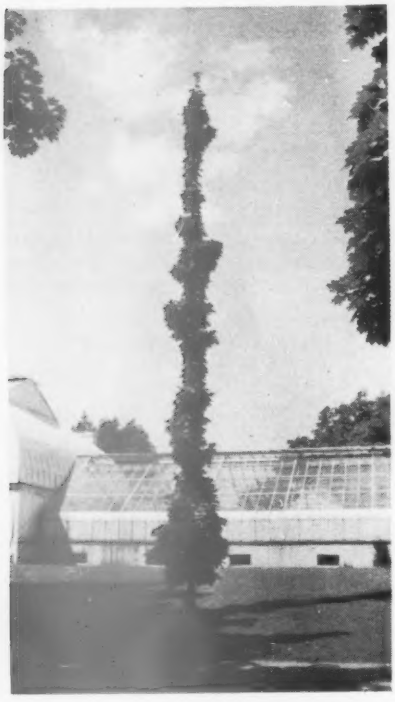
Chairman: Wm. Jack, Illinois State

(*Continued on page* 17)

Two Fastigiate Varieties of Sugar Maple

By M. A. MILNE *and* J. GERLING
Park Department
Rochester, N. Y.

In the recently completed series of articles on fastigiate or upright varieties of trees published in *Trees* magazine an upright sugar maple was described in the March-April, 1941, issue. This tree is known to the Rochester Bureau of Parks as *Acer saccharum columnare,* and is considered by the authors as an outstanding member of the fastigiate group, being particularly desirable for planting on narrow streets. Also growing in one of our parks are two specimens of another upright variety of sugar maple called the Sentry Maple (*Acer saccharum monumentale*). The form and branching habit



—*Photos courtesy Authors*

Sentry Maple (*A. saccharum monumentale*) *as Type* 1

of the latter differ from those of *A. s. columnare* and its use is very much more restricted. There seems to be a great deal of confusion concerning these two varieties. Let us describe them and compare photographs.

Acer saccharum columnare is a dense, compact, broadly columnar tree. Older specimens have many large lateral branches which divide and sub-divide to form a full crown which generally has no one central stem. The axils of the branches form acute angles. This tree is admirably suited for planting on narrow streets or wherever a fastigiate type is desired.

Acer saccharum monumentale, as growing in Rochester, has a main central stem or trunk from which very short laterals grow perpendicularly. The faster growing laterals, which are few in

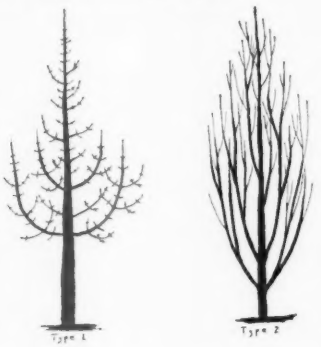
Upright Sugar Maple (*A. saccharum columnare*) *as Type* 2

number, sweep upward closely hugging the trunk. The crown is sparse and open. In the opinion of the authors this pencil-like tree is too restricted in habit to be of value for street use. However, it may be useful as a specimen or as a background for statuary.

The original specimen of *A. s. columnare* from which hundreds of trees were propagated in Rochester for street use was obtained by the Ellwanger and Barry Nursery from the Shady Hill Nursery in 1886. It is still thriving. It is about 70 feet high and has a crown spread of 25 feet.

Buds of *A. s. monumentale* were obtained from the Arnold Arboretum and specimens grown. The trees are now about 25 feet high and at no point exceed 4 feet in spread.

Trees of these two varieties are growing side by side in Highland Park and in no way resemble each other in shape, branch structure, or crown development. This difference is plainly illustrated by the accompanying photographs. According to the type classifications for upright trees as set up by the authors (*Trees,* Vol. 4, No. 1, p. 10) *A. s. monumentale* belongs in Type 1; whereas *A. s. columnare* properly belongs in Type 2.



Plant nomenclature is always in a process of change and is often confusing depending upon what authority is being quoted. The Arnold Arboretum in Bulletin of Popular Information, page 64, 1938, lists *A. s. monumentale, A. s. columnare* and *A. s. pyramidale* as synonomous varieties. However, it is the authors' contention that what we choose to call *A. s. monumentale* and *A. s. columnare* are two distinct varieties. Buyers or propagators should be certain which form is desired when securing trees or scions.

References: Trees, Vol. 3, No. 4, p. 5; Vol. 4, No. 1, p. 10; Vol. 4, No. 2, p. 17 and cover illustration; Vol. 5, No. 1, p. 5 Arnold Arboretum, Bulletin of Popular Information, Sept. 23, 1938, pp. 64, 65; May 10, 1940, p. 18.

JUST TREES

"There are some things one never forgets. One of them is the sight of trees at their best —the primeval grandeur of a great forest tract. Trees in all their grace and beauty and majesty, forest giants that have seen the generations come and go, climbing higher and higher into the upper air. There is a fascinating feeling of awe in an ancient wood. Its silence and tranquility does something to the spirit. One does not understand it, but here is something great and august and permanent."

Slime Flux of Shade Trees

By E. F. GUBA
Massachusetts State College, Field Sta., Waltham, Mass.

Slime Flux is an appropriate name for a common disease of trees. The word flux conveys the thought of a fluid discharge, especially an excessive and prolonged unhealthy discharge. Ordinarily it means the act of flowing or continuous moving on, as of a flowing stream. Slime implies a substance of a dirty offensive nature that is moist, soft and adhesive. The offensive discolored and foul smelling discharge from trees at injuries is thus adequately expressed by the term slime flux.

—*Photos Courtesy of Author*

For several years this neglected wound on American Elm exhibited a strong offensive flux from the heartwood. The jagged area was finally smoothed off and completely healed.

A flux condition in a tree may be a desirable diagnostic symptom of a pathologic disease. Examples are the bleeding canker disease of hardwoods caused by the *Phytophthora* fungus, resinosis of spruce branches associated with the *Cytospora* canker disease or gumosis of stone fruit trees associated with the *Sclerotinia* canker disease (brown rot). Slime flux usually implies more than primary bleeding. It conveys the double thought of bleeding and contamination of the discharge by foreign organisms. The majority of cases of bleeding and slime flux coming to the attention of the arborist are associated with wounds in the lower branches and trunk of shade and ornamental trees and which are independent of any pathologic or parasitic condition. The American elm is readily disposed to prolonged bleeding from the slightest wound. Wounds may be the result of borers tunneling through the bark and inward to the sapwood. Wounds along the trunk may arise by the stresses caused by alternate freezing and thawing.

The bleeding material readily becomes contaminated with foreign organisms and in consequence the discharge assumes different odors, colors and degrees of consistency. The chemicals which arise from fermentation or crystallization or as by-products can prevent or delay healing and encourage injury to the tissues coming in contact with the flow.

The removal of decayed and insect infested wood is required. Wounds should be properly shaped, water-proofed and filled where necessary. Protection with a good tree paint is all that may be necessary where bleeding has its origin outside of the heartwood. Frost cracks might only be painted. If the soil is well-supplied with water and the growing conditions are good these wounds should heal over in a reasonable period of time. Where cavity repair and filling are required and the wounds are large, practice has employed ingenious methods of tapping the wood across the path of sap pressure against the wound and of projecting drain pipes into the base of the cavity from the same or opposite side of the trunk. Draining may be into a dry well at the base of the trunk through a channel drilled through the heartwood in a zig-zag course from the wound to the base of the trunk or through pipes projecting outside of the trunk and below the cavity. Where the wounds are large more than one drain may be necessary. The skill of the workman is exhibited by the success obtained in stopping the flow and by placing the drains where they are relatively inconspicuous or cannot be seen at all.

The further thought in connection with the repair of slime flux conditions involves rapid callousing or healing of the wound. Growth may be encouraged by heavy watering, especially in times of drought, and feeding. The tree under repair should be serviced regularly to be sure that the drains are functioning and healing is proceeding as rapidly as conditions permit. As the callus tissue advances bleeding becomes less and finally ceases, but the job may require several years of supervision.

A little bleeding about the wound in spite of desirable shaping and draining should not be alarming, especially if callousing is proceeding satisfactorily. Large jagged wounds on large elms have been observed to flux for years; the heartwood is gradually smoothed off from decay and weathering but in time many of these neglected wounds heal completely. The arborist is able to hasten, safeguard and correct the process by careful repair work, disinfection, painting, draining, watering and feeding.

A skillful job of tree repair and drainage installations. These drains can be removed now. Callousing on this historic Elm was encouraged by feeding and watering.

CLUBS PROTECT PARKS

OMAHA, Neb.—Residents near each of Omaha's city parks have organized an "Omaha Park Neighbors Club" to help in the reduction of vandalism and to improve general park conditions.

Diagnosis Series No. 4: RED CEDAR RU

FORREST C. STRONG
Department of Botany
Michigan State College

The need for consideration of the rust diseases which injure red cedars and flowering apples and hawthorns is becoming more important each year. All of these trees are used freely in ornamental plantings. Too often the red cedars are planted close to the pomaceous trees either on the same or adjacent properties. Many times they are arranged close together in the same group or mass planting. As a result of the close proximity of the red cedars to the flowering apples and hawthorns these rust diseases produce more severe injury to the host trees. The beauty and decorative value of the trees is ruined and sometimes both the pomaceous and cedar hosts are eventually killed.

To better understand the problems involved in avoiding these diseases and to be able to apply the best control measures to the particular case at hand, a discussion of the symptoms and the manner of infection of these trees is necessary.

For brevity and clarity we will consider the rust disease caused by *Gymnosporangium juniperi-virginianae*. This fungus infects flowering apples and red cedars causing the disease known commonly as cedar-apple rust. During April and May the soft, woody, greenish galls on red cedar develop horn-like, gelatinous protuberences which are at first fuscous brown in color but become yellowish orange and increase in size when the rains soak them. When wetted, they present a gelatinous chrysanthemum flower-like appearance which is considered quite beautiful by those who do not realize the disease producing power of these structures.

On these swollen horns or columns are produced a series of spores which are launched into the air. If these spores alight on an apple leaf while the leaf surface is wet, they can quickly germinate and send germ tubes down into the leaf tissue, setting up an infection in the apple leaf.

About ten days after such infection takes place, tiny pale yellow spots appear on the apple leaf wherever a spore germ tube has successfully penetrated into the leaf tissue. During the months of July and August, these yellow lesions increase in size so that they may be half an inch in diameter or larger. The leaf becomes thickened in the area of the lesion. On the lower surface there now appear tiny cup-like structures with hair-like fringes surrounding each cup, making the lower lesion surface appear to be covered with fuzz. From these fruiting structures, sift out the aeciospores which are also windborne. They are quite long-lived and may travel several miles from the place where they were produced. During the remainder of the summer these spores infect the red cedar needles. Miller (9) has found that the aeciospores produced on the apple leaves are capable of germinating as late as the following spring and it is possible that they may infect red cedar foliage at that time also.

—*Photo courtesy National Shade Tree Conference*

(*a*) *Cedar-hawthorn rust lesions on hawthorn leaves. The spores produced in the structures emerging from the lower leaf surface infect red cedar foliage.*

(*b*) *A large cedar-apple rust gall as it appears almost fully expanded in the spring during the period of spore production.*

The first visible signs of infection on the red cedar become evident during July of the following year. Tiny soft woody galls now appear on the twigs near their tips and by October have reached their maximum size which may vary from one-eighth to two inches in diameter. The following spring (the second since the summer when infection took place) these galls develop the characteristic yellow gelatinous horns and produce there the spores which reinfect the apple leaves. Assuming that infection of the red cedar needle occurred August 15, 1940, the resultant gall would begin to produce its first spore horns this spring, some 22 months later, if these horns emerged and began to shed spores by May 15, 1942. Generally these galls produce only one crop of spores, then die.

To recapitulate the salient points in the relations of this rust fungus and its hosts:

(1) Infection of apple takes place over a period of six weeks from April 15 to June 1.

(2) Production of aeciospores on the apple leaf takes place from about July 15 until leaf fall in the autumn.

RUSTS AND THEIR CONTROL

(3) Infection of red cedar foliage occurs from about July 15 until September 15 and if Miller's suspicions prove to be correct for a period the following spring.

(4) The period between summer infection of the cedar until the galls develop spore horns ranges between 19 and 23 months.

(5) The cedar galls usually die after one crop of spores are produced.

The above points explain why the rust does not appear on red cedars until the second year after they have been brought into a community where rust is already present. Also this explains why the rust on the red cedar seems to persist the following year after control measures are taken to protect red cedar foliage from reinfection. It also explains why apple trees are safe to plant the following year even though they may have been badly rusted in a previous location the year before.

TREES SUSCEPTIBLE TO THE CEDAR-APPLE RUST FUNGUS

The cedar-apple rust fungus *Gymnosporangium juniperi-virginianae* which has been used to illustrate the events in the life cycle is the better known and, probably, is the more injurious of the two rust fungi under consideration. There are several other rust fungi affecting the red cedars and other junipers but they are of importance only in certain cases and to discuss them would only complicate further the already complicated job at hand.

The juniper hosts (1) to the above mentioned fungus are: red cedar *Juniperus virginiana* and most of its many varieties, Rocky Mountain or Colorado red cedar, *Juniperus scopulorum* and its varieties, and the Bermuda juniper, *Juniperus barbadensis* (syn. *J. bermudiana*).

Of the apple species susceptible to this rust fungus it may be said that most of our native flowering or crab apples are quite to very susceptible especially Bechtel's crab, *Malus ioensis* var. *plena,* and the wild sweet crab, *Malus coronaria.* Many of our orchard apples are more or less susceptible.

The second rust disease under consideration is the hawthorn rust caused by *Gymnosporangium globosum.* The life cycle of this parasite is almost identical with the cedar-apple rust fungus except that the galls may persist for several years and produce more than one crop of spores. This rust fungus attacks all known species and varieties of the hawthorn, *Crataegus spp.* Some species are quite resistant and will be considered later. This rust fungus also attacks many of our native crab apple species as well as several of our orchard apple varieties. It also attacks with considerable severity mountain ash, *Sorbus americana.*

According to MacLachlan (7) it attacks the three species of cedar mentioned above and also common juniper, *Juniperus communis, Juniperus fragrans,* and creeping juniper, *Juniperus horizontalis.*

—*Photos courtesy Author*

Summer application of Dow Mike sulphur to the foliage of Rocky Mountain red cedar to test the control ability of a wettable sulphur.

CONTROL OF CEDAR-APPLE AND CEDAR-HAWTHORN RUST DISEASES

We now come to that important part of our paper which concerns the control of these rusts. This may be divided into several parts, namely: (I) Separation of hosts and use of screen barriers; (IIa) Use of resistant junipers; (IIb) Use of resistant flowering apples and hawthorns; (III) Use of fungicidal sprays for protection of either the apple and hawthorn or the red cedar foliage from infection, or eradicative fungicidal sprays applied to the cedar rust galls.

I. Separation of hosts:

If red cedars are not planted closer than one mile to flowering apples or hawthorns, these rust diseases will not be sufficiently abundant to be detected except by the keenest observer.

Screens consisting of buildings, high shrubbery or non-susceptible tree groupings interposed between plantings of red cedar and flowering apple and hawthorn may permit the reduction of this distance to 500 feet or less. An actual test of such locations must be the final criterion. The deflection of spore carrying air currents away from the alternate hosts may not sufficiently reduce disease incidence to be practicable.

IIa. Use of resistant junipers:

Chinese juniper, *Juniperus chinensis,* is immune to both of these rust diseases and appears in many shapes and color shades. It may be used in place of susceptible red cedars. After a sixteen-year study, Berg (2) of West Virginia has made a selection of red cedar, *Juniperus virginiana,* which is quite resistant to cedar-apple and cedar-hawthorn rust in his state. He is now propagating it so that investigators in other parts of the country may test it for resistance to rusts in their particular regions. This may prove of value as an ornamental red cedar to replace some of the red cedar varieties now used.

IIb. Use of resistant flowering apples and hawthorns:

The Asiatic flowering apples are for the most part immune or highly resistant to both of the rust diseases under consideration. Hybrids resulting from the crossing of these Asiatic species with our native crab apples and with European apples show varying reactions to these rust fungi. A complete list of resistant species and varieties cannot be made which will be applicable to all parts of the United States because of variability to infection in various parts of the country. The reader is urged to consult the work of Bliss (3), Crowell (4), MacLachlan

(*Continued on next page*)

CEDAR RUSTS

(7) and Miller (9) for their results on resistance and susceptibility of flowering apples and hawthorns to these rusts.

The following are some of the flowering apples more commonly used which are, so far as known, immune or highly resistant:

Malus atropurpurea.
M. atrosanguinea.
M. halliana and varieties.
M. prunifolia and varieties.
M. pumila and varieties.
M. purpurea.
M. scheideckeri.
M. sieboldi.
M. spectabilis.
M. toringoides.

MacLachlan (7) did not find any hawthorns which were completely resistant to the hawthorn rust fungus. He did find, however, that hawthorns which produced shiny leaves, that is those which have a thick waxy cuticle, are quite resistant and can be planted in reasonable proximity to red cedars without becoming seriously rusted.

He classified the various groups of the genus Crataegus according to his findings on their resistance to cedar-hawthorn rust as follows:

Resistant: Crus-galli, Bracteatae, Azaroli, Microcarpae, Nigrae, Pinnatifidae, Sanguineae, Triflorae, Uniflorae.

Moderately susceptible: Molles, Macracanthae, Rotundifoliae, Punctatae, Douglasianae, Silvicolae, Pruinosae, Virides, Flavae, Oxyacanthae, Intricatae.

Very susceptible: Anomalae, Coccineae, Tenuifoliae, Dilatatae.

An example of the resistant group is *Crataegus crus-galli*, the cockspur thorn, a familiar and good ornamental species. *Crataegus oxyacantha*, English hawthorn, and its variety, *C. oxyacantha* var. *paulii* are both favorites and even though located in the moderately susceptible group are able to grow fairly close to red cedars without serious injury from rust.

III. Use of fungicidal sprays:

Crowell and MacLachlan (5) obtained good control of cedar-apple and cedar-hawthorn rusts by applying protective sprays on the foliage of the pomaceous trees in the spring during the time when spores were being produced on the red cedars. They recommend six or even seven applications made at seven to ten day intervals on the apple and hawthorn foliage. The first application is made just "prior to the first rain after the young leaves have emerged from the buds." Their favorite fungicide was Linco Colloidal sulphur (a wettable sulphur) at the rate of 6 pounds per 100 gallons of water. An appropriate sticker and spreader should be used. Hamilton (6) obtained good control on commercial apple varieties in the Hudson River valley with lime-sulphur, Bordeaux Mixture and wettable sulphurs. He urges the use of the more mild wettable sulphurs because of the possible injury to the foliage with the other fungicides. He obtained good control following the "regular apple scab" spray schedule and where cedar-apple rust was a serious problem, applied additional sprays.

Crowell and MacLachlan (5) also obtained good control of the cedar-apple and cedar-hawthorn rusts by spraying red cedars during July, August and September, at three to four week intervals with Linco Colloidal sulphur, 6 pounds per 100 gallons of water. This is also a protective type of spray.

A new angle in spray control methods has been introduced by Marshall (8). He has found that a modified Bordeaux Mixture, i.e., Bordeaux Mixture 180, when applied to the foliage of the red cedar early in the spring will effect a reduction in new gall production by at least 80% and at the same time inhibit spore production on the mature galls which are about to produce spores. He believes that better control of the rust can be accomplished if additional applications of this spray are made during the spring. This is an eradicative type of spray since it kills the spores before they can germinate.

Bordeaux Mixture 180 used by Marshall has the following formula:

Copper sulphate	12 lbs.
Quick lime	8 lbs.
Monocalcium arsenite	2 lbs.
Zinc arsenite	8 lbs.
Fish oil	2 pts.
Water to make	100 gals.

The ingredients of this spray are very poisonous so that care must be taken that the materials are not left where children or livestock may ingest them.

Strong and Cation (10) in a preliminary report state that a 1% Elgetol spray applied to the galls on the red cedars in the spring of 1940, during the period when the galls were producing spores from the gelatinous horns, inhibited germination of all spores on all galls examined and that the spray chemical did not injure the cedar foliage. Continued spray trials with this chemical during the spring of 1941 indicated incomplete control of spore germination and some temporary injury to foliage was observed. This method of eradicative spray control is still in the process of experimentation.

In conclusion it must be emphasized that the best way to combat cedar-apple and cedar-hawthorn rust diseases is to avoid the planting of susceptible alternate hosts near to each other. If junipers of the red cedar type are desired in plantings near to flowering apples or hawthorns, resistant or immune species and varieties such as the Chinese juniper is urged. If red cedar or its varieties or Rocky Mountain red cedar are necessary in the planting scheme, then care must be exercised to select only immune or highly resistant flowering apples and hawthorns to place near them.

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Your Help Needed to Buy Redwoods

Preservation of imperiled Redwood forests in northwestern California before it is too late is urged in the Annual Report of the Save-the-Redwoods League, issued recently.

An immediate task of the League involves acquisition of the famed Avenue of the Giants, north of Dyerville, Humboldt County, now directly in the path of lumbering operations, it is emphasized in the report. The State of California stands ready to match private contributions dollar-for-dollar in completion of the preservation project along the Avenue of the Giants.

During the first World War, in 1918, the Save-the-Redwoods League was organized "to save for posterity the oldest trees in the world." Then, as now, the primeval Redwood forests of California were recognized as pre-eminent among our national assets, inspiring to highest patriotism and offering solace to those who visit the cathedral groves, "where all is peace."

Today, as then, our nation is fighting for ideals—and the Save-the-Redwoods League in a very real sense represents the preservation of ideals.

In 1941 good progress was made in saving the Redwoods, while at the same time new situations arose to be met and solved in continued development of our plan of conservation.

MILL CREEK REDWOODS

In carrying out the program for acquisition of Redwood forest lands necessary for completion of the Mill Creek Redwoods State Park, arrangements were made to purchase the first unit of the lands under option. This unit of 200 acres, six miles northeast of Crescent City, Del Norte County, California, is one of the most heavily forested areas in the world.

For the new purchase, the Save-the-Redwoods League has contributed $26,111.11, to match the funds made available by the State of California, the total purchase price for each unit in the Mill Creek forest lands under option being $52,222.22.

It is anticipated that the second unit under this option will be acquired in the coming year, as the State of California has made provision for contributing one-half of the purchase price. The Save-the-Redwoods League aims to raise the funds necessary to match the State money for this desirable acquisition of superb Redwood forest in the Mill Creek-Smith River region.

—Courtesy Save-the-Redwoods League

The tallest tree in the world. The Founders Tree (Sequoia sempervirens) 364 feet high named in honor of the founders of the Save-the-Redwoods League.

THE AVENUE OF GIANTS

That the program of Redwood forest preservation in the Avenue of the Giants region is urgent has become increasingly manifest. It has been realized all along that the Avenue of the Giants is immediately in the path of lumbering operations. Toward the end of 1941, the lum-

(*Continued on page* 17)

The Arborist and Camouflage

By Karl F. Amalia
President, National Arborist Association
Manchester, Mass.

I suppose some of you people are wondering what that young "whipper snapper" such as myself knows about *"Camouflage."* To put your mind at ease, may I say that I am a "reporter" and not a camouflage expert.

Camouflage is a science of providing protective concealment for buildings, airports, troops, gun placements, etc.

Camouflage can be broken down into two types: *Military* and *Private Installations.* We are concerned primarily with Private Installation such as industrial and airport protective concealments.

Basically, the *three types* of Camouflage are:

1. *Complete Hiding,* such as constructing a building underground and using the earth level for natural vegetative screening.

2. *Blending.* This consists of "tying in" the objects to be screened with the natural color and design of the surroundings.

3. *Deception.* This would be the use of "dummies." A good instance of this type would be the false railroad station erected to fool the R.A.F. flyers in Hamburg, Germany.

Camouflage is a "battle of wits" between the scientists of the countries at war. Modern warfare has changed the concept of camouflage. We now know the enemy always scouts the objective by plane and takes pictures with modern cameras equipped with fast and infra-ray filter films. The enemy obtains more information from this type of scouting than from any other type of spying. The new cameras can take pictures from as high as men can fly in the air and from 35 miles away.

We know the importance of aircraft in this war. Our country is striving to build the largest and finest air force in the world, to stop the attacks of our enemies. This type of warfare carries the war directly to civilians. As the *plane* develops in this type of warfare, all the more urgent becomes *our need for camouflage protection.*

A large and industrial installation can not be concealed entirely. We must use the *confusion technique* to make visual bombing very difficult.

A bombardier must see his objective. He *cannot* hit an objective unless he sees it through his bomb-sight. Our primary job is to hide the factory from the camera and confuse the bombardier. We know that he only has a few seconds to draw a bead on his target. Any hesitancy or question in his mind ruins his mission. *Then your camouflage has been successful!*

THE PROBLEM

How does an expert go about camouflaging an *industrial plant?*

He works the same as the architect by first designing a *scale model* of the factory. These models are placed on turntables against different backgrounds to simulate normal conditions. The factory model is then observed from different heights to determine how it would look from a plane, at an altitude of five miles. The observer will also study the model from some distance away, at a height, *through the wrong end of a pair of binoculars.* This gives an idea of what the bombardier sees when he approaches the target. Different lenses and filters produce, artificially, problems such as haze, fog, rain, etc. After these models have been perfected, they are checked by army engineers and the *actual plant camouflage is begun.*

This is a good time to bring up the question: *Where do we as shade tree specialists come into the picture?*

I shall speak, first, to men who will soon be called to the Service, and that will mean many of us who are married and up to 45 years of age.

The Army welcomes those who are interested in this phase of warfare. After eight weeks of basic training, you can apply for a transfer to such a Camouflage Unit. You will then receive further instructions in actual field camouflage under the Engineer Corps.

As a professional arborist, you can help as a contractor. The Engineer Corps agree with us that there is no better material for camouflage than *trees and shrubs where they can be used.* You should contact your nearest United States District Engineers Office. They will be interested to hear from you, and as soon as contracts are drawn up, *you will be invited to participate. Don't expect* a contract right away—the program must necessarily proceed slowly. An organization must be trained. And it takes weeks to perfect all this. All private industrial camouflage comes under the Office of Civilian Defense at the present time.

(*Continued on next page*)

Melaleuca Leucadendron

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This business is like all business—*you will have to fight for it!* It just won't come to you. *Go after it and keep after it.* When this Camouflage Program breaks, it will be a big thing! *It is up to you arborists to sell your service to the people interested. Do not* go to Washington, to your Senator, War Department, or Civilian Defense Headquarters. It won't do you any good. The man for you to see and keep in touch with is your *local United States Army District Engineer.*

PROGRESS

The question has been asked: "How far has the Army gone on Camouflage?"

The Army has been working hard at research. Using old established principles, they have developed new and modern methods of technique. They are now training military and civilian experts.

THE FUTURE

You older men in this profession are the "pioneers." You have introduced science, the skilled worker, and have shown the average person the worth of his trees. That was a tough, arduous job!

There will be exceptionally difficult times ahead—but you must work hard to protect the progress already made. Push this Camouflage hard! It may be the salvation of many of our businesses.

The younger arborists must fight in the front lines. On the home front you arborists can prepare our country with *trees for camouflage defense!*

We shall go "all out" this year—and help win the battle.

REFERENCES

Engineer Field Manual on Camouflage 5-20. Purchase at: Superintendent of Documents, Washington, D. C. Price 15 cents. (The official War Department text.)

Military Engineer, "Camouflage," Jan. and Feb. issues, 1942.

Architectural Forum, Jan. 1942.

"Trees" Magazine, "Trees in Camouflage," Sept. 1941 issue.

Camouflage Technique, Maj. H. P. Breckenridge, 17th Proceedings of National Shade Tree Conference.

Architectural Record.

Fortune Magazine for March, "Industrial Camouflage."

SCHOOLS

Buffalo School of Applied Art.
Rhode Island Institute of Art.
American School of Design, N. Y.

The Tree Butcher's Trade Mark

Bill Erdman, Asplundh Tree Expert Co. of Omaha, Neb., sent in the swell "Butcher" picture. Note the heavy cables wrapped *around* the main limbs and the iron band fastened *around* the trunk. They weren't satisfied with one strangle hold and wanted to make sure the tree would be killed.

Now Southern Chapter

At its Fifth Annual meeting at Miami in February the Southern Shade Tree Conference officially became the Southern Chapter of the National Shade Tree Conference.

This move climaxed a splendid meeting featured by many fine papers dealing with the problems of trees in the Southern States.

Dr. John T. Creighton of the University of Florida, was elected president of the new chapter. Dr. George H. Hepting, Division of Forest Pathology, Asheville, N. C., was elected vice-president.

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The City Arborists' Column

Statistics on Municipal Spraying

By EDWARD A. CONNELL
Tree Warden
Town of Stamford, Conn.

The Town of Stamford, Connecticut, keeps careful statistics dealing with roadside and park shade tree care and maintenance. Realizing quite keenly the ill-repute surrounding the very name "statistics" but also believing that figures do indicate something, I have made an analysis of 1941 roadside elm spraying in Stamford which may be of interest to the newly-formed City Arborists' group within the National Shade Tree Conference and to the readers of *Trees*.

Road	*Large Elms*	*Small Elms*	*Total*	*Tot. Gals.*	*Av. per tree*
A	25	.....	25	350	14
B	8	.....	8	150	18½
C	19	3	22	200	9
D	37	9	46	650	14
E	37	3	40	750	18
F	15	19	34	200	6
G	42	107	149	1350	9
H	11	.....	11	200	18
J	46	24	70	750	10½
K	56	73	129	1100	8½
L	3	.....	3	75	25
M	44	2	46	450	9
N	57	1	58	675	12
Totals	400	241	641	6900	10½

For our local purposes, elms are divided into two groups—"large" and "small." The towering giants are considered "large" and those with diameter from 2" up to about 6" are considered "small." The record on a few of our many roads for the month of May, 1941, is as follows: (See Chart Above).

Naturally, the above tabulation cannot be considered micrometrically accurate! The gallonage per road, always given in round numbers (350 and not 347 or 353½) can, of course, be questioned, but the margin of error here would be small for the simple reason that at the end of each day with an empty spray tank, the record of each road with its number of trees was carefully compared. For instance, the above tabulation represents two days of roadside spraying. During those two days, exactly 6900 gallons of spray mixture were pumped onto the foliage of exactly 641 elms. More than one-half of the 6900 gallons represents the first day's work when the program called for early morning spraying in the rural districts. The second day's run was in closely-settled areas with the problems of parked cars (author's note: will *this* hazard disappear during the summer of 1942 because of the Malayan campaign?) and traffic.

The tabulation represents the work of a four-man crew—driver, traffic man, two men alternating with the gun and mixing. In terms of hours, the days were both 8½ hour shifts with extremely thorough coverage of the elms.

I have computed the average gallonage per "large" elm to be somewhere between 15 and 25, for the "small" elm between 4 and 7 gallons. From the total gallonage of 6900, it would appear that we hit the low averages (15 and 4) rather than the higher.

However, I would be interested in knowing whether my findings are in line with those of other municipal shade tree authorities.

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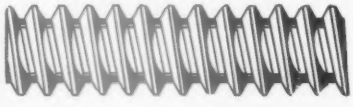

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Save the Redwoods

(*Continued from page* 13)

ber company owning all of this forest not yet acquired for the State Park system commenced logging on about 110 acres in the northwest corner of the Avenue of the Giants area (originally part of the preservation project).

Though the lumber company has shown a cooperative attitude toward the Avenue of the Giants project, the fact remains that the Save-the-Redwoods League has not yet the resources to purchase the additional units, and that great effort should be made to meet this critical need, to raise the money required.

Stress is laid by the League on "the human values" of the Redwoods. Dr. John C. Merriam, president, is quoted: "In these days when the world is ridden with hate and distress, mankind needs more than ever the healing value of contact with Nature in its sublimest forms, as exemplified by these Redwood forests."

Contributions for preservation of the Avenue of the Giants in all its primitive grandeur and beauty are made through the Save-the-Redwoods League, whose treasurer is Dr. Robert Gordon Sproul, 250 Administration building, University of California, Berkeley.

CONGRESS IN TRAGIC ERROR

A recent report tells of the slicing of the fire-fighting appropriation by the Forest Service. Eighteen million had been asked and the usually slap-happy House cut the budget allowance of five million to two.

The front line of this war will be waged in West Coast forests this summer. Devastating fires will seriously hamper, if not halt, decisive defense work. Wake up, Congress!

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National Conference

Dept. of Agriculture, Division of Plant Industry, 526 Crescent, Glen Ellyn, Ill. Glen Ellyn 1531.

Glen Pierce, Illinois State Dept. of Agriculture. Same as above address. Glen Ellyn 1531.

Dr. L. R. Tehon, Illinois State Natural History Survey, Urbana, Ill.

Nels J. Johnson, 1212 Elmwood Ave., Evanstone, Ill. Greenleaf 1877.

Charles Rapp, Glencoe Park Dist., Glencoe, Ill. Glencoe 6.

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Chairman: Fred Heuchling, Chicago Park Dist., Chicago, Ill. Harrison 5252.

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Frank J. Prem, 4 Electric Place, Wilmette, Ill. Wilmette 1765.

J. F. Thomason, 7639 S. Luella, Chicago, Ill. Regent 6958.

Publicity

Chairman: Wm. A. O'Malley, Cook County Forest Preserve Dist., Lake and Harlem Ave., River Forest, Ill. Forest 4470.

Fred Heuchling, Chicago Park Dist., Chicago, Ill. Harrison 5252.

Attendance

Chairman: Roy O. Walker, Chicago Park Dist., Chicago, Ill. Harrison 5252.

Charles May, Davey Co., 110 S. Dearborn, Chicago, Ill. Randolph 1604.

Entertainment

Chairman: Thos. Lynch, Box 335, Winnetka, Ill. Winnetka 1294.

O. E. Asplundh, 2131 Glenview Rd., Glenview, Ill. Glenview 451.

Al. Carlstrom, Chicago Park Dist., 2341 West 111th Place, Chicago, Ill. Midway 7611.

Save-the-Redwoods

Send 10 cents each for these attractively illustrated pamphlets: "A Living Link in History," by John C. Merriam ... "Trees, Shrubs and Flowers of the Redwood Region," by Willis L. Jepson ... "The Story Told by a Fallen Redwood," by Emanuel Fritz ... "Redwoods of the Past," by Ralph W. Chaney. All four pamphlets free to new members—send $2 for annual membership (or $10 for contributing membership).

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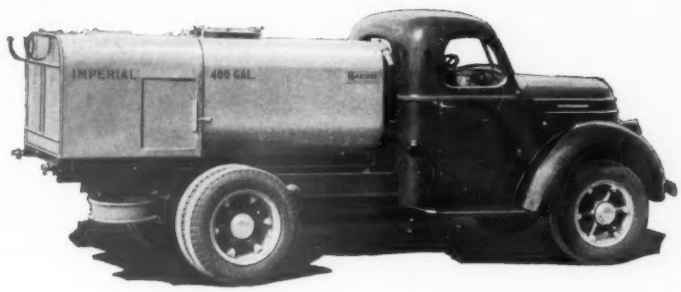

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Authors and Books

The following books may be ordered from TREES Magazine, Box 886, Santa Monica, California.

STANDARDIZED PLANT NAMES. Harlan P. Kelsey and William A. Dayton. J. Horace McFarland Co., Harrisburg, Pa. 692 p., $10.50.

This is another of the basic books upon which every library should be built. The confusion that has surrounded the names of too many plants in the past can only be overcome if everyone would obtain and use this book. Naturally, there will be disagreement with some of the names, but in the long run a chaotic situation can be cleared by a cooperative, intelligent adoption of this monumental work.

The book is beautifully printed in an easily read type. It contains more than 90,000 entries and over 200 authors in various fields collaborated. It is an epic and no library can be complete without *Standardized Plant Names.*

CAMOUFLAGE WITH PLANTING. Ralph Rodney Root. Ralph Fletcher Seymour, Publishers, 410 S. Michigan Ave., Chicago. 79 pp., illus. $1.50.

The ten pages in this book entitled "Plant Zone Tables" is especially valuable in this tremendously important work of camouflage. Plants are listed on the basis of their leaf characteristics, color and the plant height. On the basis of the splendid treatment in the text of the values of foliage with regard to aerial photography and visibility the table is a most necessary climax to an important contribution in camouflage.

The pages devoted to aerial photography and the results from various types of foliage is of extreme value and importance. The book largely discusses principles and will be of inestimable value to anyone with whom camouflage is or may be an important subject in the days ahead.

TEXTBOOK OF BOTANY. E. N. Transeau, H. C. Sampson, L. H. Tiffany. Harper & Bros., New York, 1942. 812 pp., 424 figs: 4 plates in color. $4.00.

The authors being professors of botany in several universities are naturally well acquainted with the faults of most textbooks on the subject. They have set out to overcome these faults and have succeeded admirably.

They have brought up to date the latest findings of science and a sequence of subjects that seems to flow more smoothly than older texts. The following chapters illustrate this point well: "Seasonal Aspect of Plants," "Flowers, Fruits and Seeds," "Plants of the Past," and "The Vegetation of North America."

The photographs are particularly well-chosen and entirely new. The references are well-chosen and diversified.

In general it is a splendid book for reference or study and should be in every worthwhile library, public or private.

THE GYPSY MOTH THREAT IN THE UNITED STATES. Dr. E. P. Felt. Circular No. 1, Eastern Plant Board, College Park, Md.

Reduced appropriations threaten the gains made in recent years in holding and overcoming the devastation by Gypsy Moth larvae to eastern oak forests.

This threat has resulted in the action taken by the Eastern Plant Board in publishing this valuable paper by Dr. Felt.

Since 1890 control of the Gypsy Moth has cost fifty million dollars, but if it is permitted to spread the cost, either of future control or of timber lost, will be far in excess of the above figure.

Dr. Felt gives a very complete picture of the history and current status of this situation in this bulletin that every tree man should have and may obtain by writing either the Board or Dr. Felt.

TEXTBOOK OF DENDROLOGY (Revised Edition). Harlow & Harar. McGraw-Hill Book Co., Inc., New York. 542 pp., illus., $4.50.

This second edition of a mighty fine dendrology text is improved by the addition of range maps, a most important aid to people engaged in selecting either shade or forest trees.

Also in the second edition there is a description of all-important species under the head "Botanical Features."

This book is indispensable in the dendrology section of your library since no one book covers the situation entirely or adequately.

OUR SHADE TREES (Revised Edition) Ephraim Porter Felt. Orange-Judd Publishing Co., Inc., New York. 316 pp., illus., $2.00.

In addition to the 100 extra pages of text and valuable data this revision of Dr. Felt's popular book first published in 1937, is greatly enhanced by the use of coated paper which makes a much more pleasing appearance and easier reading.

The important additions treat of the experiences and findings of the terrific hurricane that swept the eastern seaboard states in 1938 and of the extensive and damaging ice storm that swept Rhode Island and eastern New Jersey in 1940. Of course Dr. Felt's many years of experience in shade tree entomology make the data on insects of immeasurable value to the arborist, city forester and others engaged in control.

Tree Warden Course

(*Continued from page* 6)

tury of Combatting Gypsy Moth in Massachusetts (illus.): H. B. Ramsey, Mass. Dept. Conservation.

The Gypsy Moth Problem: A. F. Burgess, U. S. Dept. of Agriculture.

Trees and Wildlife: R. E. Trippensee, M.S.C.

Ferns in the Roadside Landscape: A. V. Osmun, M.S.C.

Perennial Gardens: S. C. Hubbard, M.S.C.

Municipal Tree Programs: L. F. Prouty, Asst. Supt. Park Dept., Springfield.

Public Shade Tree Policy and the Municipal Lighting Assn. of Mass: A. G. Sias, Exec. Com., Municipal Lighting Assn., Reading, Mass.

Planning Boards and Trees: A. J. MacNeil, chairman Wellesley Planning Board.

Defense Work Along State Highways: J. V. McMannon, Massachusetts Department of Public Works.

Shade Tree Clearance for Wire Using Agencies: D. C. Barton, Technical Advisor, New England Forestry Service, Inc.

Methodical vs. Haphazard Line Clearance Work: R. R. Habberley, Superintendent of Distribution, Western Massachusetts Electric Company.

The Tree Warden's Annual Report: C. J. Rohr, M.S.C.

Ornamental Trees of the Tropics and Subtropics: W. H. Hodge, M.S.C.

Research, Plants and Plantsmen: W. L. Doran, M.S.C.

Common Insect Pests of Trees of Massachusetts: W. B. Becker, M.S.C.

Municipal Tree Problems and National Defense: M. A. McKenzie, M. S.C.

The Tree Warden and the Home Owner: A. M. Davis, M.S.C.

The Community and the Forest: Department of Forestry, M.S.C.

Tour of Tropical Greenhouses on the Campus: S. J. Ewer, M.S.C.

The Tree Warden in Relation to Other Municipal Departments: Judge Edward T. Simoneau, Marlborough, Mass.

When and How to Take Cuttings With Rootone

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The usual times for taking cuttings in the Northern U. S. are as follows: flowering perennials, August or September; greenhouse mums, February to April; carnations, November to February; coniferous shrubs, fall or winter; deciduous shrubs, June to August; lilacs, May; azaleas and rhododendrons, June and July.

In the South and on the Pacific Coast, because of the longer season of growth, cuttings can be taken at any time according to the condition of the plant. This also is true of house plants.

Geraniums, cacti and succulents should be allowed to dry out or "wilt" for at least 12 hours before dipping in ROOTONE and setting in the cutting bed.

For more exact directions on making cuttings we refer the professional grower to Laurie and Chadwick's "The Modern Nursery," published by the MacMillan Company of New York (price $5.00.)

For the gardener the book, "How to Grow Perennials," by V. H. Ries, gives helpful suggestions on the propagation of cuttings. It costs $1.00, from Doubleday-Doran Company of New York.

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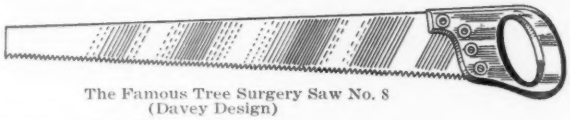

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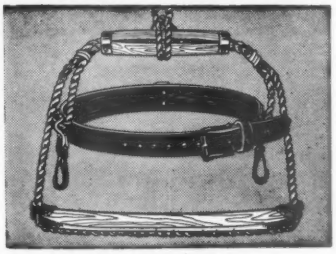

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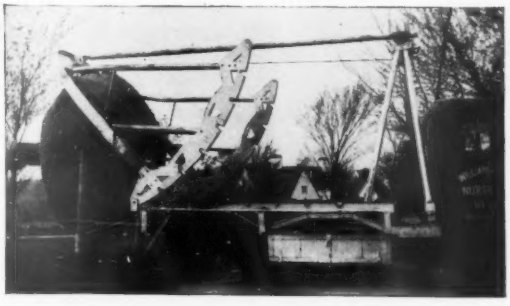

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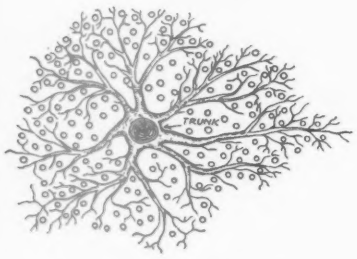

Diagram of root system

(1) *Diagram showing method of supplying Gaviota* TRE-TONIC *to Chlorotic trees. This method is advocated by leading Arboricultural authorities. Average dosage is computed at 5 lbs. of Gaviota* TRE-TONIC *to each inch of trunk diameter for trees over 6 in. For trees under 6 in. cut dosage 50%. Punch holes with bar or augur at the points indicated in the diagram by small circles.*

PACIFIC GUANO

A complete line of Fertilizers for every need of the Park Administrator, Nurseryman, Arborist, Gardener and others.

For Chlorotic trees and shrubs, do not fail to try

GAVIOTA TRE-TONIC

Chlorosis is a common, troublesome affliction of ornamental trees and shrubs. You can solve this problem with Gaviota Tre-Tonic. Compounded to meet the food deficiencies that cause most type of Chlorosis.

Don't wait. Now is the time to fertilize trees and shrubs.

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TRANSPLANTONE

MAKES ROOTS GROW FASTER AND REDUCES LEAF LOSS

TRANSPLANTONE treatment will enable this pine tree to continue uninterrupted growth after being moved.

While TRANSPLANTONE solution usually increases root development on all trees, evergreens or deciduous, it is especially effective on azalea, juniper, rhododendron, pine, hemlock, pyracantha, holly, pin oak and sweet gum. It is cheap insurance against replacement.

HOW TO USE

REG. U. S. PAT. OFF.
TRANSPLANTONE

Dissolve 1 ounce of TRANSPLANTONE in 10 gallons of water. Apply to the root area of the tree after planting, using at least 1 gallon of solution for each inch of trunk diameter.

It pays to water holly, whether Japanese or otherwise, with TRANSPLANTONE solution immediately after moving.

3 oz. can $1.00 — 1 lb. can $4.00

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American Chemical Paint Co.

Horticultural Division T-6 **AMBLER, PA.**